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# **WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE  
and  
COLORADO AGRICULTURAL EXPERIMENT STATION  
STATE ENGINEER of COLORADO  
and STATE ENGINEER of NEW MEXICO

Data included in this report were obtained by the agencies named above in cooperation with the Bureau of Reclamation, U.S. Forest Service, National Park Service, Corps of Engineers and other Federal, State, and private organizations.

AS OF  
MAR. 1, 1969

## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

## PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80521
Idaho	P. O. Box 38, Boise, Idaho 83707
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82602

## PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



# **WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

*Issued by*

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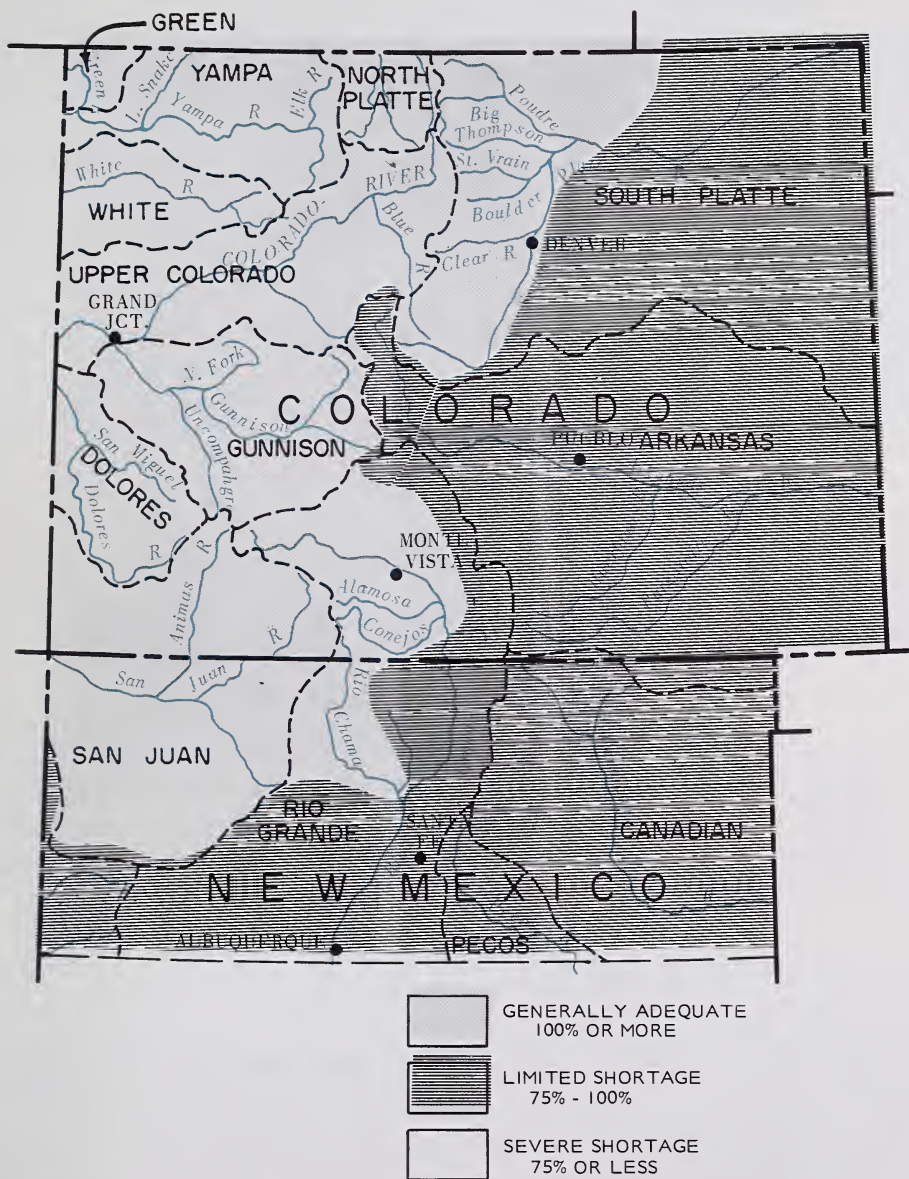
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WATERSHED II	- ARKANSAS RIVER WATERSHED  Describes water supply conditions in Lake County, Upper Arkansas, Fremont, Custer County Divide, Fountain Valley, Black Squirrel, Horse-Rush Creek, Central Colorado, Turkey Creek, Pueblo, Bessemer, Olney Boone, Cheyenne, Upper Huerfano, Stonewall, Spanish Peaks, Purgatoire, Branson Trinchera, Western Baca County, Southeastern Baca County, Two Buttes, Bent, Timpas, Northeast Prowers, Prowers, West Otero, East Otero, and Big Sandy Soil Conservation Districts.
WATERSHED III	- RIO GRANDE WATERSHED (COLORADO)  Describes water supply conditions in Rio Grande, Center, Mosca Hooper, Mt. Blanca, Sanches, and Culebra Soil Conservation Districts.
WATERSHED IV	- RIO GRANDE WATERSHED (NEW MEXICO)  Describes water supply conditions in Lower Cebolla, Abiquiu-Vallecitos, Eastern Taos, Lindrith, Coyote-Canones, Espanola Valley, Pojoaque, Jemez, Santa Fe-Sandoval, Tijeras, Cuba, and Edgewood Soil Conservation Districts.
WATERSHED V	- DOLORES, SAN JUAN, AND ANIMAS RIVERS WATERSHED  Describes water supply conditions in San Miguel Basin. Dove Creek, Dolores, Mancos, LaPlata, Pine River, San Juan, and Glade Park Soil Conservation Districts.
WATERSHED VI	- GUNNISON RIVER WATERSHED  Describes water supply conditions in Delta, Gunnison, Cimarron, Shavano, and Uncompahgre Soil Conservation Districts.
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# WATER SUPPLY OUTLOOK

as of  
March 1, 1969



The map on this page indicates the most probable water supply as of the date of this report. Estimates assume average conditions of snow fall, precipitation and other factors from this date to the end of the forecast period. As the season progresses accuracy of estimates improve. In addition to expected streamflow, reservoir storage, soil moisture in irrigated areas, and other factors are considered in estimating water supply. Estimates apply to irrigated areas along the main streams and may not indicate conditions on small tributaries.

## WATER SUPPLY CONDITIONS

as of  
March 1, 1969

GENERALLY THE SNOWFALL PATTERN IS THE SAME AS FEBRUARY FIRST. THE WESTERN SLOPES OF THE FRONT RANGE HAVE ABOVE AVERAGE SNOWFALL WHILE THE EASTERN SLOPE INDICATES NORMAL TO SLIGHTLY BELOW NORMAL SNOW.

THE SAN JUAN AREAS OF COLORADO AND NEW MEXICO HAVE HEAVY SNOW AS DOES THE GRAND MESA IN COLORADO. THE SOUTH PLATTE DRAINAGE OF COLORADO HAS THE POOREST SNOW.

RESERVOIR STORAGE IS POOR IN THE ARKANSAS DRAINAGE. THE FIRST OF THE MONTH SNOW IS NOT REFLECTED IN THIS REPORT.



COLORADO-- THE SNOW PACK IN THE WESTERN PART OF THE STATE IS EXCELLENT, HOWEVER, THE EASTERN SLOPE IS NOW ONLY NORMAL OR LESS. SNOWFALL WAS LESS THAN NORMAL OVER THE ENTIRE EASTERN SLOPE DURING FEBRUARY. THE SOUTH PLATTE AND ITS NORTHERN TRIBUTARIES HAVE THE LOWEST SNOW PACK IN THE STATE. THE PLATTE, HOWEVER, HAS GOOD CARRY-OVER STORAGE AND FAIR VALLEY SOIL MOISTURE. GENERALLY SUMMER WATER SUPPLIES SHOULD BE ADEQUATE IN WESTERN COLORADO. TWO MONTHS REMAIN TO INCREASE THE EASTERN SLOPE SNOW PACK.



NEW MEXICO -- PROSPECTS FOR SUMMER STREAMFLOW IMPROVED SLIGHTLY DURING FEBRUARY. IF SNOWFALL IS AT LEAST NORMAL FOR THE REST OF THE WINTER THERE SHOULD BE NO SEVERE WATER SHORTAGES. SEVERAL AREAS, THE CHAMA AND SAN JUAN HAVE MUCH ABOVE AVERAGE SNOW PACKS AND SHOULD HAVE EXCELLENT WATER SUPPLIES THIS SUMMER. GENERALLY CARRY-OVER STORAGE IS BETTER THAN LAST YEAR AND WILL AUGMENT SUMMER FLOWS. SOIL MOISTURE IS ABOUT AVERAGE OVER THE STATE.

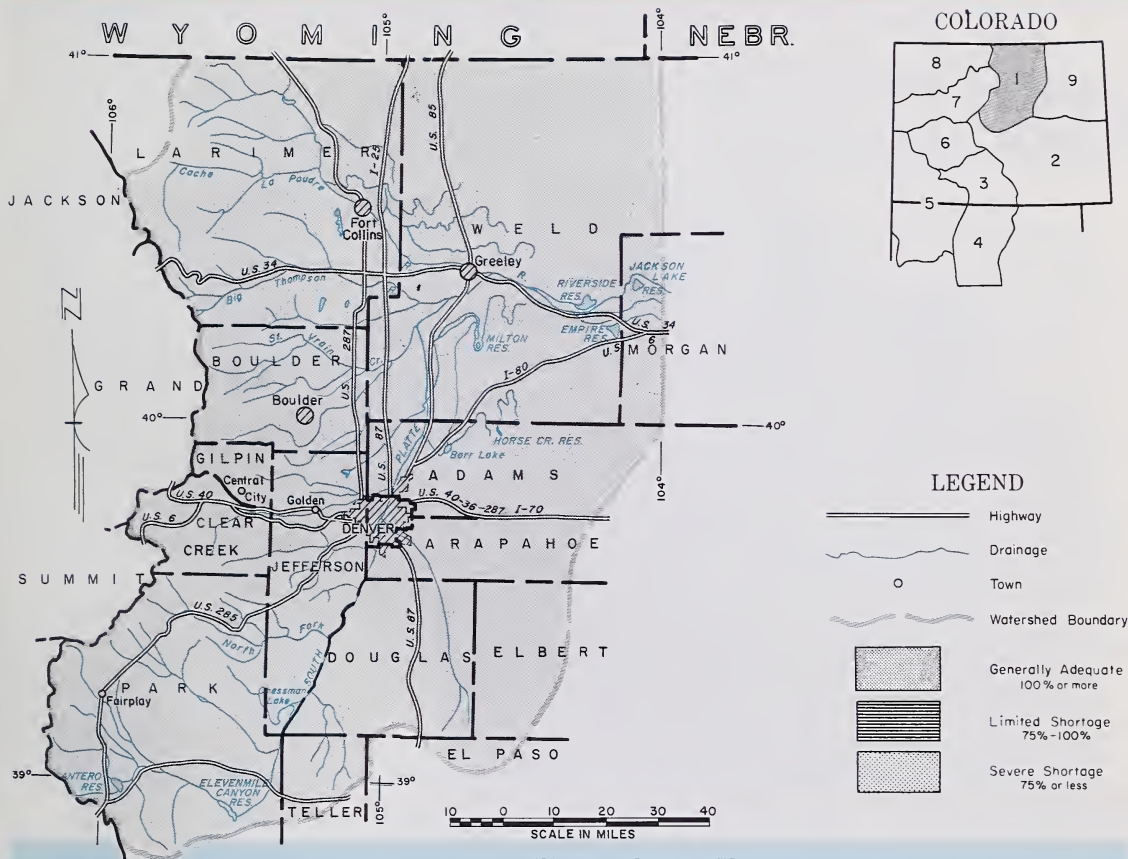


# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE SOUTH PLATTE RIVER WATERSHED IN COLORADO

as of

March 1, 1969.

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



## YOUR WATER SUPPLY

SNOWFALL ON THE SOUTH PLATTE DRAINAGE WAS BELOW NORMAL DURING FEBRUARY. THIS DROPPED FORECASTS BELOW THE NORMAL MARK. FORECASTS RANGE FROM 83% ON THE ST. VRAIN TO 98% ON CLEAR CREEK. THE ONLY BASIN THAT STILL HAS ABOVE AVERAGE SNOW PACK IS THE CACHE LA POUDE. HERE THE SNOW PACK IS JUST NORMAL.

RESERVOIR STORAGE IS GOOD AND WILL HELP SUPPLY IRRIGATION THIS SUMMER.

VALLEY SOILS WERE IN POOR CONDITION PRIOR TO THE MARCH 1st SNOWFALL. SOILS MAY BE IN SLIGHTLY BETTER CONDITION NOW.

This report prepared by

JACK N. WASHICHEK and RONALD E. MORELAND  
SOIL CONSERVATION SERVICE, COLORADO STATE UNIVERSITY  
FORT COLLINS, COLORADO

Issued by

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U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
DENVER, COLORADO DENVER, COLORADO

*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac.Ft.) -

# WATER SUPPLY OUTLOOK expressed " Poor,Avg,Good "

STREAM and STATION	FORE CAST	THIS YEAR %AVE.	15 YR. AVE. 1953-67
Big Thompson at Drake (2)	89	89	100
Boulder at Orodell	47	96	49
Cache La Poudre at Canon Mouth (1)	195	91	215
Clear Creek at Golden (3)	116	98	119
Saint Vrain at Lyons	58	83	70

(1) Observed flow minus trans-basin diversions.  
 (2) Observed flow plus by-pass to power plants.  
 (3) Observed flow minus diversions through Jones Pass.

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Bear Creek	Avg.	Avg.
Coal Creek	Avg.	Avg.
North Fork of So. Platte	Avg.	Avg.
North Fork of Cache La Poudre	Avg.	Avg.
Ralston Creek	Avg.	Avg.
Rock Creek	Avg.	Avg.

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Boulder	2	52	73
Big Thompson	5	90	92
Cache La Poudre	8	91	109
Clear Creek	6	74	84
Saint Vrain	2	67	84
South Platte	3	85	90

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
South Platte	2	99	93
Clear Creek	2	80	86
Boulder	1	75	105
Saint Vrain	2	77	100
Big Thompson	3	89	91
Cache La Poudre	2	94	85

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Antero	33.0	15.9	15.9	10.6
Barr Lake	32.2	24.7	26.7	18.9
Black Hollow	8.0	3.7	3.5	3.3
Boyd Lake	44.0	38.4	41.7	27.8
Cache La Poudre	9.5	4.7	8.4	7.0
Carter Lake	108.9	90.3	92.5	71.3
Chambers Lake	8.8	2.6	3.2	2.7
Cheeseman	79.0	40.6	39.5	46.4
Cobb Lake	34.3	14.6	20.0	9.9
Eleven Mile	97.8	94.6	93.1	72.0
Fossil Creek	11.6	6.2	6.5	6.1
Gross	43.1	35.1	31.1	24.0

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Halligan	6.4	4.5	4.5	3.8
Horsetooth	143.5	98.4	97.9	93.6
Lake Loveland	14.3	4.2	12.2	8.1
Lone Tree	9.2	1.6	8.0	6.2
Mariano	5.4	5.5	5.1	3.9
Marshall	10.3	2.1	5.5	2.5
Marston	18.0	13.8	13.8	14.3
Milton	24.4	14.6	16.4	9.5
Standley	42.0	24.9	29.3	9.8
Terry Lake	8.2	4.4	6.2	4.9
Union	12.7	3.7	11.5	7.5
Windsor	18.6	10.9	11.3	8.4

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March 1, 1969

**LEGEND**

- Highway
- Drainage
- Town
- Watershed Boundary
- Generally Adequate  
100% or more
- Limited Shortage  
75%-100%
- Severe Shortage  
75% or less

**SCALE IN MILES**

0 10 20 30 40

**COLORADO**

**NEW MEXICO**

**OKLAHOMA**

**YOUR WATER SUPPLY**

F. A. MARK---STATE CONSERVATIONIST      W.D. McCORKLE ---AREA CONSERVATIONIST  
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
DENVER, COLORADO      LA JUNTA, COLORADO

## *The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr - Sept

# WATER SUPPLY OUTLOOK expressed "Poor, Avg, Good "

STREAM and STATION	FORECAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
Arkansas nr Pueblo (4)	328	110	298
Arkansas at Salida (4)	338	109	309
Cucharas nr LaVeta	9	75	12
Purgatoire at Trinidad	30	65	46

(4) Observed flow plus change in Clear Creek, Twin Lakes, and Sugar Loaf Reservoirs minus diversions through Busk - Ivanhoe and Twin Lake Tunnels and Ewing, Front Pass, Wurtz and Columbine ditches.

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Apishapa	Avg.	Poor
Fountain Creek	Avg.	Poor
Grape Creek	Avg.	Avg.
Hardscrable Creek	Avg.	Avg.
Huerfano	Avg.	Poor
Monument Creek	Avg.	Avg.

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Arkansas	10	86	98
Cucharas and Purgatoire	2	80	85

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Arkansas	3	55	77
Cucharas and Purgatoire	1	100	139

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Adobe	61.6	0.0	7.4	11.5
Clear Creek	11.4	8.0	8.4	6.6
Cucharas	40.0	0.7	0.0	6.9
Great Plains	150.0	6.7	54.0	35.4
Horse Creek	26.9	0.0	0.4	4.9

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
John Martin	353.9	15.8	39.4	85.1
Meredith	41.9	0.0	2.3	9.0
Model	15.0	1.5	3.3	3.1
Turquoise	130.0	26.6	1.6	7.0
Twin Lakes	57.9	26.0	30.1	20.1

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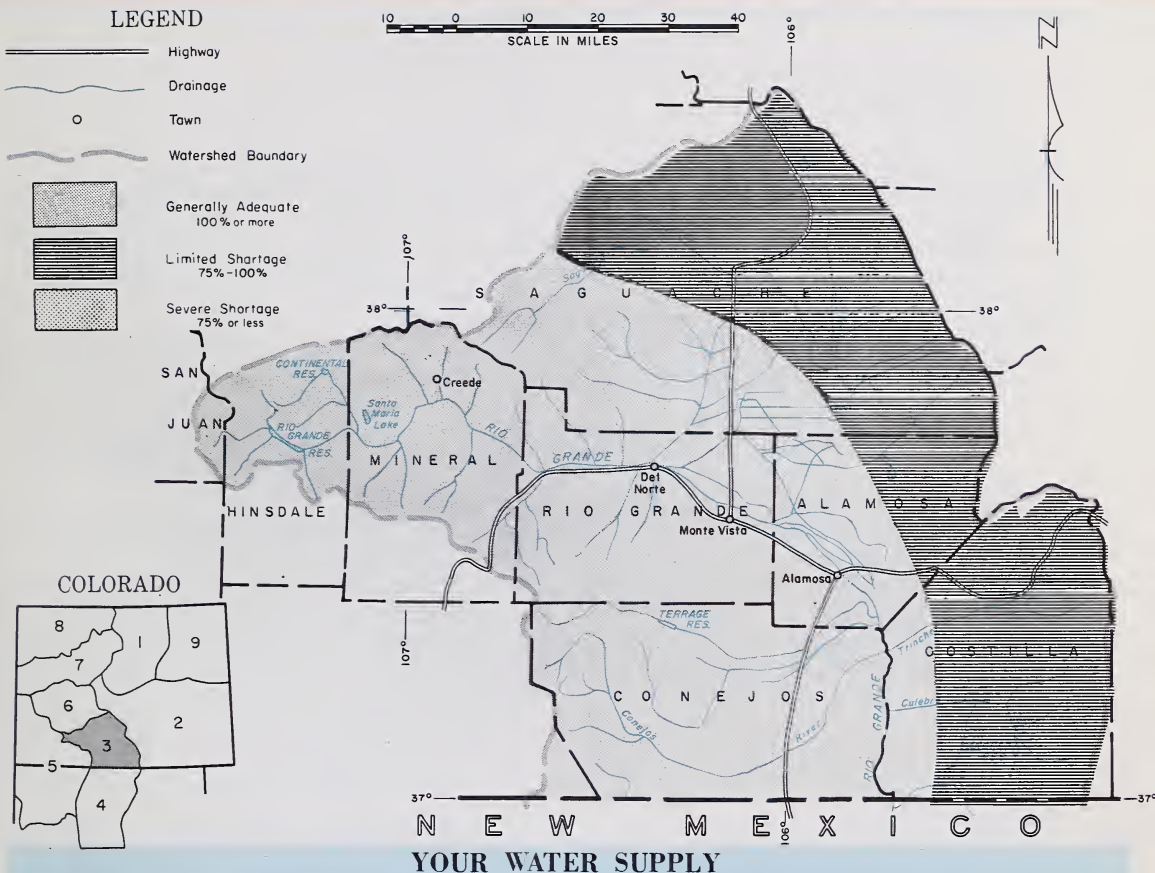


# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE UPPER RIO GRANDE WATERSHED IN COLORADO

as of

March 1, 1969

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



THE SNOW PACK ON THE RIO GRANDE IS STILL IMPROVED FROM LAST MONTH. SNOW RANGES FROM NORMAL ON THE CULEBRA DRAINAGE TO 132% OF NORMAL ON THE CONEJOS. FORECASTS ARE FOR BETTER THAN AVERAGE FLOWS IN ALL STREAMS. CARRY-OVER STORAGE IS BETTER THAN NORMAL AND CONSIDERABLY BETTER THAN LAST YEARS. VALLEY SOILS ARE IN FAIR CONDITION. THIS REPORT DOES NOT REFLECT THE FIRST OF THE MONTH STORM, WHICH WOULD AFFECT VALLEY SOILS, BUT NOT MATERIALLY INCREASE RUNOFF EXPECTATIONS.

This report prepared by  
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FORT COLLINS, COLORADO

Issued by  
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DENVER, COLORADO OURANGO, COLORADO

*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr-Sept

# WATER SUPPLY OUTLOOK expressed "Poor, Avg, Good "

STREAM and STATION	FORE CAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
Alamosa abv Terrace	85	137	62
Conejos nr Mogote	270	148	182
Culebra at San Luis (6)	19	100	19
Rio Grande at 30 Mile Bridge (5)	132	113	117
Rio Grande nr Del Norte (5)	480	110	438
South Fork at South Fork	145	132	110

(5) Observed flow plus change in storage in Santa Maria,  
Rio Grande and Continental Reservoir.  
(6) Observed flow plus changes in storage in Sanchez  
Reservoir.

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Saguache Creek	Avg.	Avg.
Sangre de Cristo Creek	Avg.	Avg.
Trinchera Creek	Avg.	Avg.

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Alamosa	2	116	121
Conejos	3	146	132
Culebra	2	89	99
Rio Grande	10	106	118

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Alamosa	2	91	88
Conejos	1	75	85
Culebra	2	103	126
Rio Grande	3	110	116

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Continental	26.7	6.4	4.0	4.4
Platoro	60.0	3.0	3.0	7.1
Rio Grande	45.8	21.3	7.4	12.0

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Sanchez	103.2	11.8	12.4	10.6
Santa Maria	45.0	3.8	2.5	5.5
Terrace	17.7	11.2	7.0	3.7

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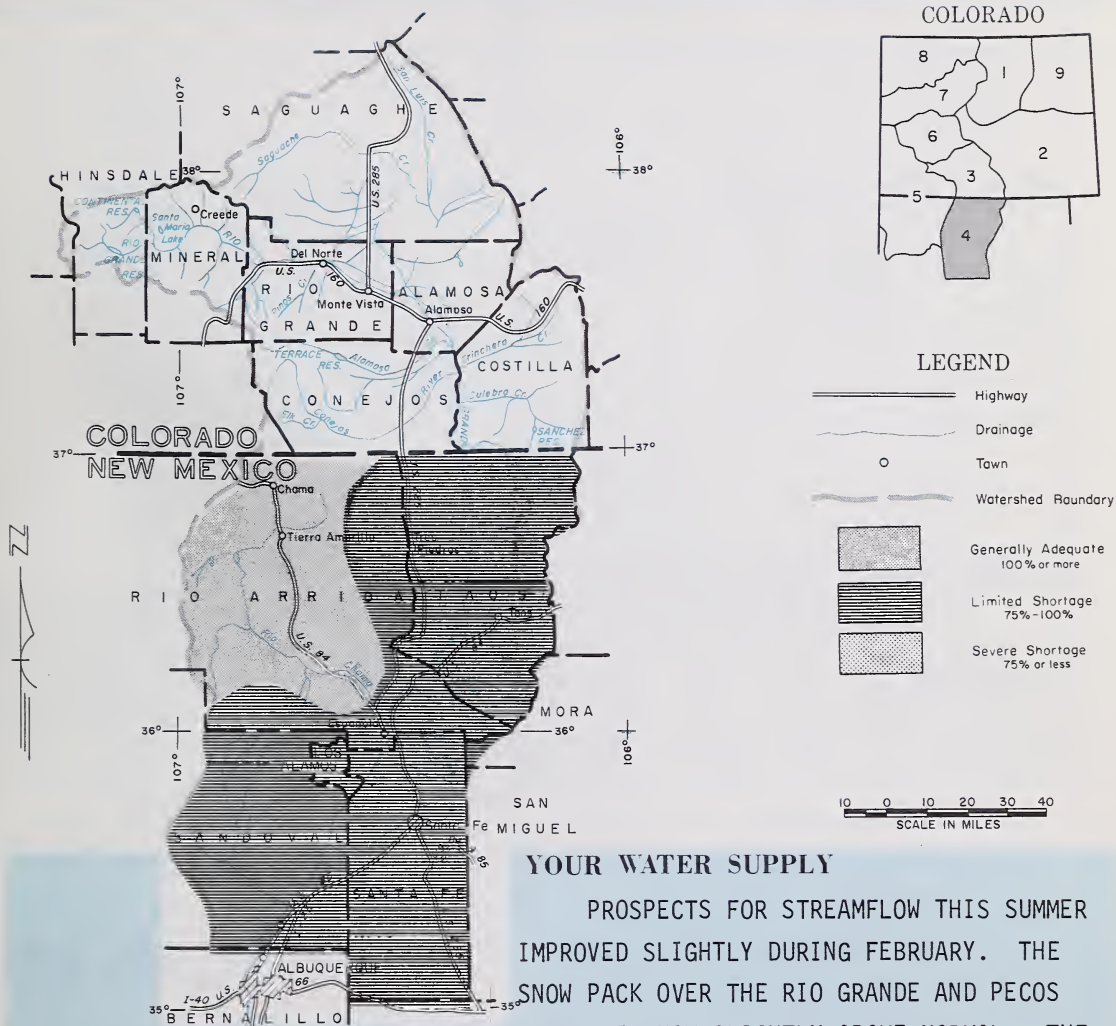
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# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE RIO GRANDE WATERSHED IN NEW MEXICO

as of  
March 1, 1969

U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



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FORT COLLINS, COLORADO

Issued by  
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U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
ALBUQUERQUE, NEW MEXICO SANTA FE, NEW MEXICO

*The Conservation of Water begins with the Snow Survey*



# STREAMFLOW FORECASTS (1,000 Ac. Ft.)

STREAM and STATION	FORECAST AS INDICATED	THIS YEAR %AVE.	15 YR. AVE. 1953-67
Costilla at Costilla(8)	16 MJ	89	18
Pecos at Pecos	41 MJ	100	41
Rio Chama into ElVado	300 MJ	160	188
Rio Grande at Otowi (7)	650 MJ	126	513
Rio Gr at San Mar. (7)	460 MJ	138	334
Rio Hondo nr Valdez	15 MJ	100	15
Red R. at mouth nr Questa	32 MJ	100	32

The Forecast of the Rio Grande at San Marcial is 72% of the Average used by the Elephant Butte Irrigation District.

A - S is April through September.

A - J is April through July.

M - J is March through July.

(7) Observed flow plus changes in storage in El Vado and Abiquiu Res.

(8) Observed flow plus changes in storage in Costilla Reservoir.

# WATER SUPPLY OUTLOOK expressed "Poor,Avg,Good "

STREAM	FLOW PERIOD	
	March May	June July
Embudo Creek	Avg.	Avg.
Jemez River	Avg.	Avg.
Mora River	Avg.	Avg.
Nambe Creek	Avg.	Avg.
Rio Ojo Caliente	Avg.	Avg.
Rio Pueblo de Taos	Avg.	Avg.
Santa Fe Creek	Avg.	Avg.

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Pecos	1	65	103
Rio Chama	4	151	158
Rio Grande, N.M.	13	105	115
Rio Hondo	1	114	-
Red River	2	79	100

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Pecos	2	95	84
Rio Chama	2	84	155
Rio Grande	5	69	81
Red River	1	120	82

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Alamogordo	111	68	72	76
Caballo	344	57	42	81
Conchas	273	124	184	163
Elephant Butte	2195	406	343	370

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
ElVado	195	1.1	1.2	4.0
McMillen-Avalon	32	8.0	11.4	19.6

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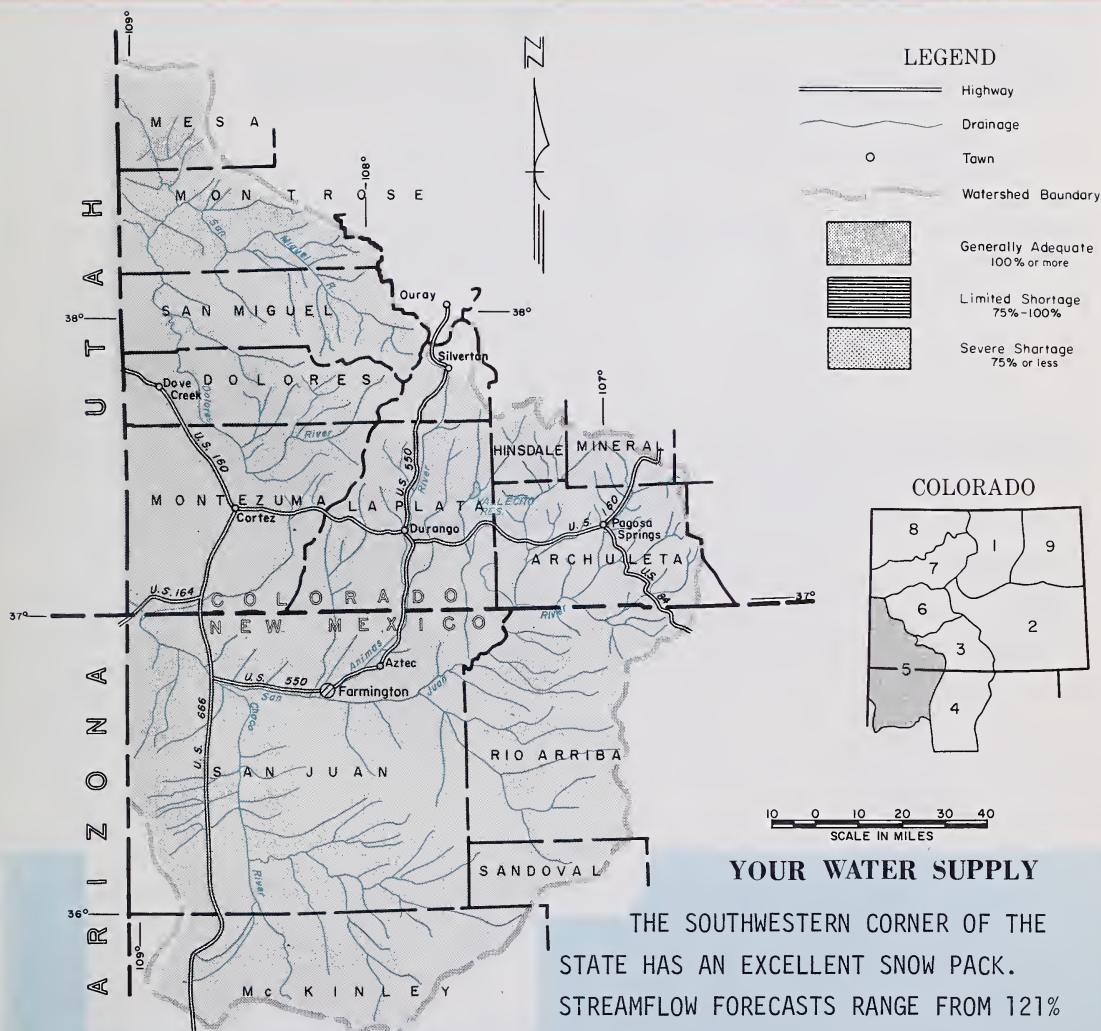
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# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE SAN MIGUEL, DOLORES, ANIMAS, SAN JUAN WATER- SHEDS IN COLORADO AND NEW MEXICO

March 1 of 1969

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



THE SOUTHWESTERN CORNER OF THE STATE HAS AN EXCELLENT SNOW PACK. STREAMFLOW FORECASTS RANGE FROM 121% OF AVERAGE ON THE LA PLATA TO 156% ON THE PIEDRA. ALL THE AREA STREAMS SHOULD FLOW MUCH ABOVE AVERAGE THIS SUMMER. GOOD WATER SUPPLIES ARE VIRTUALLY ASSURED DURING THE GROWING SEASON. VALLEY SOILS ARE REPORTED TO BE IN GOOD CONDITION. CARRY-OVER STORAGE IS GOOD.

This report prepared by  
JACK N. WASHICHEK and RONALD E. MORELAND  
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*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr - Sept

# WATER SUPPLY OUTLOOK expressed "Poor, Avg, Good"

STREAM and STATION	FORE CAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
Animas at Durango	560	137	409
Dolores at Dolores	355	154	231
La Plata at Hesperus	29	121	24
Los Pinos at Bayfield (9)	265	137	194
Piedra Creek at Piedra	255	156	163
San Juan at Carracas	500	132	379
Inflow to Navajo Res. (9)*	920	149	619

(9) Observed flow plus changes in storage in Vallecito

\* Reservoir

(April - July)

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Florida	Good	Good
Mancos	Good	Good
San Miguel	Good	Good

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Animas	6	109	149
Dolores	4	117	167
San Juan	5	136	137

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Animas	3	53	58
Dolores	3	61	76
San Juan	2	68	73

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Groundhog	22	12.7	12.1	6.8
Lemon	40	22.0	16.5	14.5
Navajo	1036	873.0	587.5	256.7
Vallecito	126	68.6	35.4	47.8

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67

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# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE GUNNISON RIVER WATERSHED IN COLORADO as of March 1, 1969

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



## YOUR WATER SUPPLY

SNOW PACK ON THE GUNNISON AND ITS TRIBUTARIES IS EXCELLENT. SURFACE CREEK HAS 151% OF NORMAL, WHILE THE UNCOMPAHGRE AND GUNNISON HAVE 135% AND 132% RESPECTIVELY. SOME SNOW COURSES ON GRAND MESA ARE NEARING THE RECORD. RESERVOIR STORAGE IS 140% OF LAST YEAR WITH BLUE MESA CONTAINING 534,500 ACRE- FEET COMPARED TO 354,500 ACRE-FEET LAST YEAR, WHILE TAYLOR RESERVOIR HAS 39,200 ACRE-FEET COMPARED TO LAST YEAR 53,000 ACRE-FEET. SOIL MOISTURE CONDITIONS IN THE VALLEY SOILS ARE REPORTED AS GOOD.

This report prepared by  
JACK N. WASHICHEK and RONALD E. MORELANO  
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GRAND JUNCTION, COLORADO

*The Conservation of Water begins with the Snow Survey*



# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr-Sept

STREAM and STATION	FORECAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
Gunnison nr Gr. Junction	450	128	137
Surface Cr. nr Cedaridge	22	138	16
Uncompahgre at Colona	190	147	129

# WATER SUPPLY OUTLOOK expressed "Poor,Avg,Good "

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
North Fork of Gunnison	Good	Good
Taylor	Good	Good

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Gunnison	13	126	132
Surface Creek	3	153	151
Uncompahgre	3	100	135

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Gunnison	1	78	111
Surface Creek	1	96	91
Uncompahgre	1	96	91

## RESERVOIR STORAGE ( 1,000 Ac. Ft. ) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Blue Mesa	941.0	534.5	354.5	- -
Taylor	106.2	39.2	53.0	56.0

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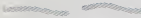


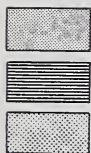
# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE COLORADO RIVER WATERSHED IN COLORADO

as of  
March 1, 1969

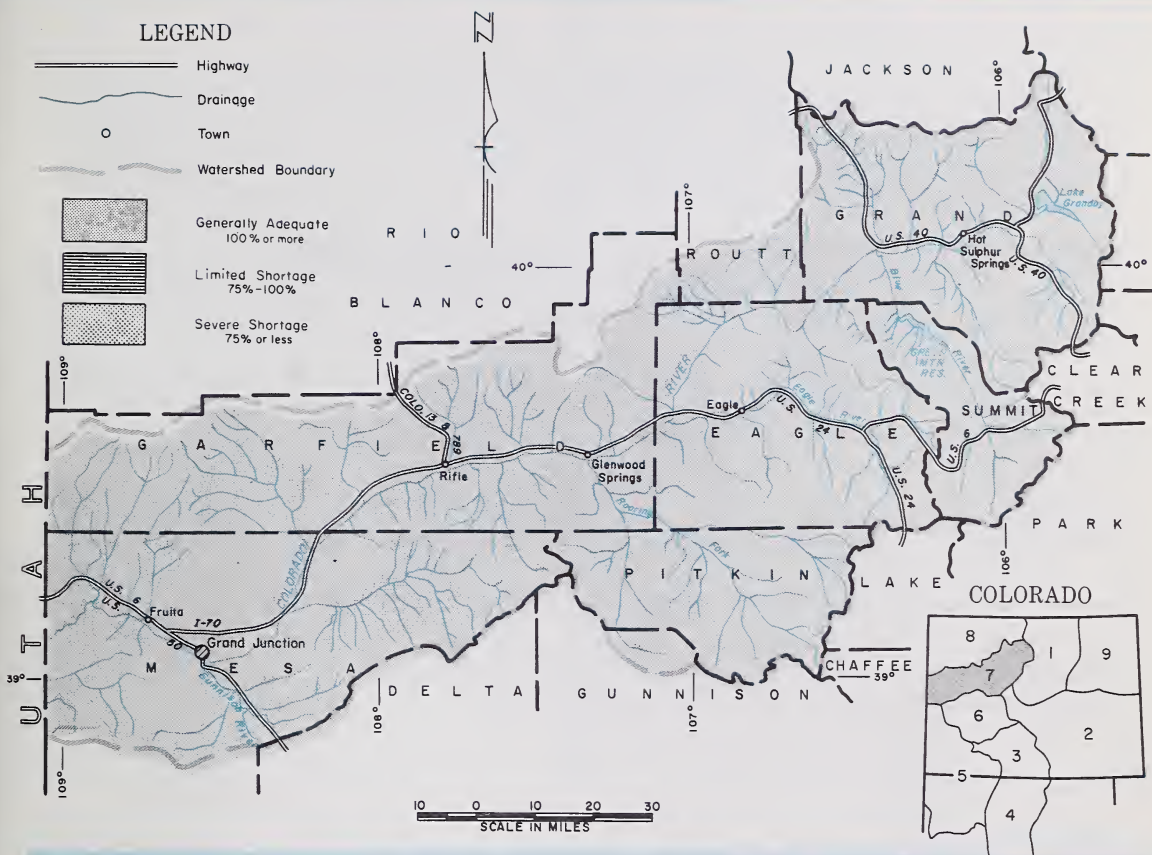
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COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO

## LEGEND

-  Highway
-  Drainage
-  Town
-  Watershed Boundary



- Generally Adequate  
100% or more
- Limited Shortage  
75%-100%
- Severe Shortage  
75% or less



## YOUR WATER SUPPLY

SNOWFALL DURING FEBRUARY WAS SLIGHTLY LESS THAN NORMAL, HOWEVER, ALL DRAINAGES STILL HAVE AN ABOVE AVERAGE SNOW PACK. EXPECTED SUMMER STREAMFLOW IS ABOVE NORMAL OVER THE ENTIRE BASIN. THE SNOW PACK ON THE GRAND MEÑA IS APPROACHING A MAXIMUM OF RECORD. THERE SHOULD BE NO WATER SHORTAGES THIS SUMMER IF WE OBTAIN NORMAL SNOWFALL THE REST OF THE WINTER. VALLEY SOILS ARE IN GOOD CONDITION.

This report prepared by

JACK N. WASHICHEK and RONALD E. MORELAND  
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Issued by

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DENVER, COLORADO	GLENWOOD SPRINGS, COLORADO	GRAND JUNCTION, COLORADO

*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr - Sept

# WATER SUPPLY OUTLOOK expressed "Poor,Avg,Good "

STREAM and STATION	FORECAST	THIS YEAR %AVE.	15 YR. AVE. 1953-67
Blue Rv abv Green Mt.(10)	245	104	236
Colo Rv inflow to Granby Res. (11)	245	112	219
Colo Rv nr Dotsero (12)	1420	103	1375
Roaring Fk at G1 Spr. (14)	850	123	692
Williams Fk nr Parshall (15)	75	125	60
Willow Cr. inflow to Will. Cr. Res.	65	141	46
Colo nr Cameo (12)	2330	105	2216

(10) Observed flow plus change in storage in Dillon Reservoir.  
 (11) Observed flow diversions by Adams Tunnel and Grand River Ditch plus change in storage in Granby Reservoir.  
 (12) Observed flow plus the changes as indicated in (11) plus Moffat Ditch.  
 (14) Observed flow plus diversion through Twin Lakes Tunnel.  
 (15) Observed flow plus diversions through Jones Pass Tunnel.

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Brush	Good	Good
Eagle River	Good	Good
Gypsum Creek	Good	Good

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Blue River	7	92	100
Colorado	19	98	111
Roaring Fork	7	115	121
Williams Fork	2	108	120
Willow	2	135	131
Plateau	3	150	151

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Blue River	1	117	96
Colorado	4	101	94
Roaring Fork	1	96	98
Willow	1	92	92

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Dillon	254.0	237.1	226.8	129.5
Granby	465.5	146.8	118.0	232.9
Green Mountain	146.9	75.7	75.2	62.6

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Williams Fork	96.8	32.2	25.0	27.1
Willow Creek	9.0	6.9	6.8	6.3
Vega	32.1	10.9	2.4	11.0

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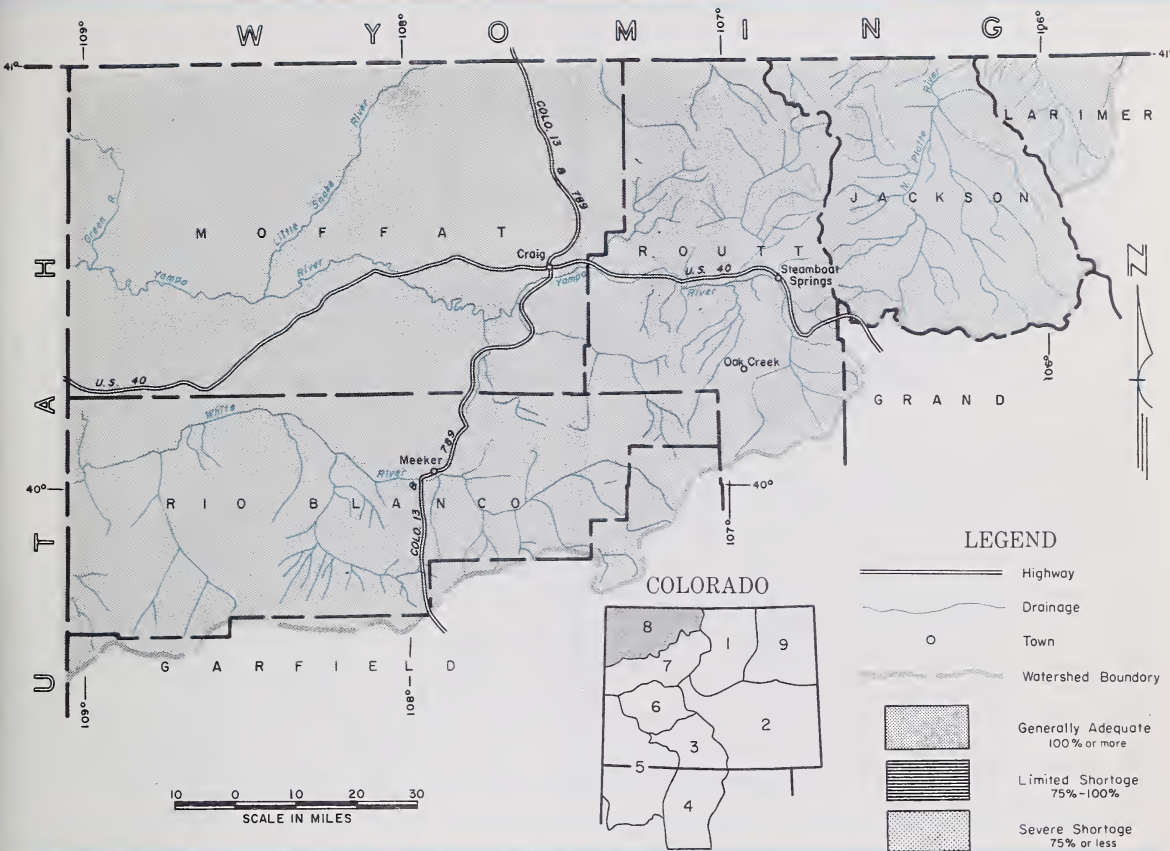
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# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE YAMPA, WHITE, AND NORTH PLATTE RIVER WATERSHEDS IN COLORADO

as of  
March 1, 1969

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



## YOUR WATER SUPPLY

WATER SUPPLY FORECASTS IN THIS AREA FELL OFF SHARPLY AS OF MARCH 1st, HOWEVER, ALL FORECASTS ARE STILL ABOVE NORMAL AND WATER SUPPLIES SHOULD BE ADEQUATE THIS SUMMER. THE SNOWFALL DURING FEBRUARY WAS BELOW NORMAL.

MOUNTAIN SOILS ARE IN FAIR CONDITION.

VALLEY SOILS ARE IN GOOD CONDITION AND THE MONTH END STORM SHOULD HAVE ADDED ADDITIONAL MOISTURE.

This report prepared by

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*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr - Sept

# WATER SUPPLY OUTLOOK expressed "Poor, Avg, Good"

STREAM and STATION	FORECAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
Elk at Clark	210	110	191
Laramie at Jelm	110	106	104
Little Snake at Lilly	350	126	277
North Platte at Northgate	261	116	225
White nr Meeker	330	113	293
Yampa nr Maybell	1040	122	853
Yampa at Steamboat Spgs.	325	125	260

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Canadian River	Good	Good
Hunt Creek	Good	Good
Illinois River	Good	Good
Michigan River	Good	Good
Oak Creek	Good	Good
Trout Creek	Good	Good

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Elk	1	93	109
Laramie	2	105	107
North Platte	5	111	126
White	2	109	111
Yampa	5	99	115

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Laramie	2	94	85
North Platte	2	95	90
Yampa	1	147	74

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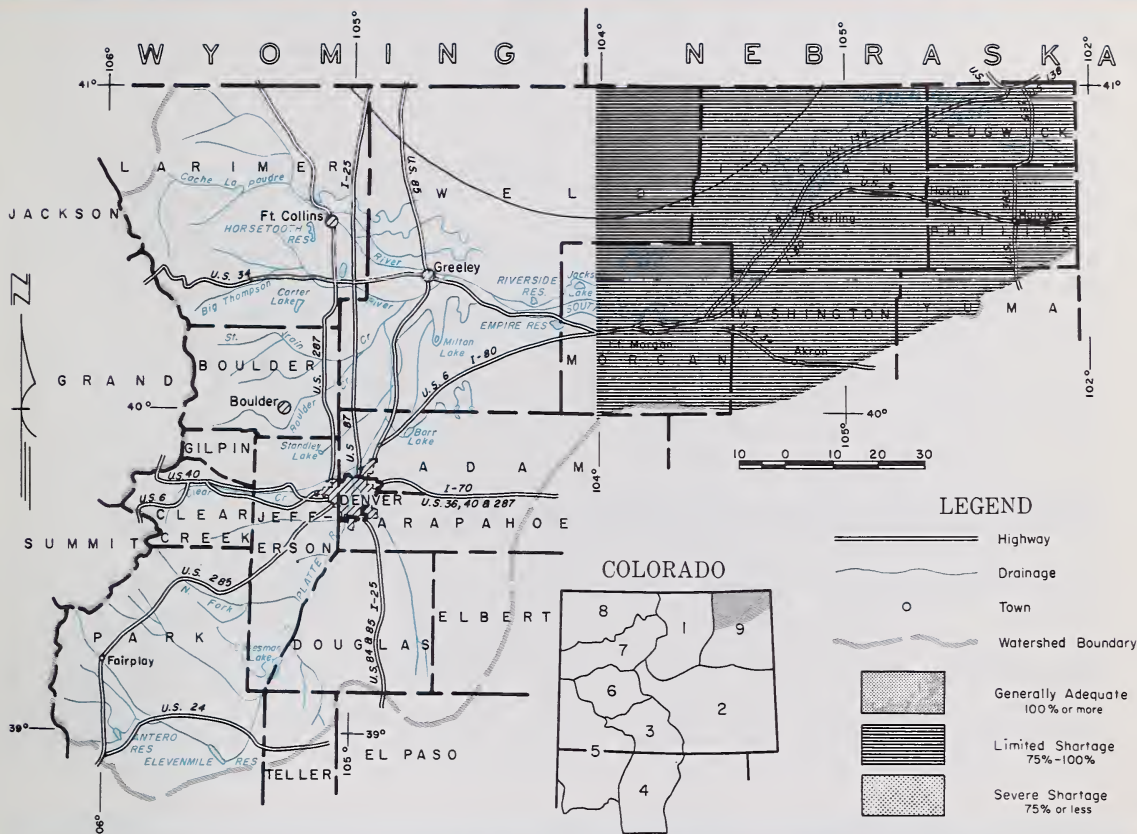


# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE LOWER SOUTH PLATTE RIVER WATERSHED IN COLORADO

as of

March 1, 1969

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



## YOUR WATER SUPPLY

THE SNOW PACK IS BELOW NORMAL ON ALL THE WATERSHEDS EXCEPT CACHE LA POUDE WHICH HAS 109% OF NORMAL. BOULDER CREEK IS LOW WITH 73%. BIG THOMPSON AND THE SOUTH PLATTE SNOW PACK IS ABOUT 90%, WHILE CLEAR CREEK AND SAINT VRAIN IS 84% OF NORMAL. THE LOW ELEVATION SNOW PACK IS BELOW NORMAL. SOIL MOISTURE CONDITIONS ARE BELOW NORMAL IN THE IRRIGATED AREAS. CARRY-OVER STORAGE IS ABOUT 95% OF LAST YEAR AND 113% OF NORMAL. ADDITIONAL SNOW IS NEEDED TO ASSURE ADEQUATE WATER THIS SUMMER.

This report prepared by

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*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr - Sept

# WATER SUPPLY OUTLOOK expressed "Poor, Avg, Good "

STREAM and STATION	FORECAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
Big Thompson at Drake (2)	89	89	100
Boulder at Orodell	47	96	49
Cache La Poudre at Canon Mouth (1)	195	91	215
Clear Creek at Golden (3)	116	98	119
Saint Vrain at Lyons	58	83	70

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
South Platte from Greeley to Fort Morgan	Avg.	Avg.
South Platte from Fort Morgan to Sterling	Avg.	Avg.
South Platte below Sterling	Avg.	Avg.

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Boulder	2	52	73
Big Thompson	5	90	92
Cache La Poudre	8	91	109
Clear Creek	6	74	84
Saint Vrain	2	67	84
South Platte	3	85	90

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
South Platte	2	99	93
Clear Creek	2	80	86
Boulder	1	75	105
Saint Vrain	2	77	100
Big Thompson	3	89	91
Cache La Poudre	2	94	85

## RESERVOIR STORAGE ( 1,000 Ac. Ft. ) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Carter	108.9	90.3	92.4	71.3
Cheeseman	79.0	40.6	39.5	46.4
Eleven Mile	97.8	94.6	93.1	72.0
Empire	37.7	31.3	33.6	27.2
Horsetooth	143.5	98.4	97.9	93.6

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Jackson	35.4	31.5	33.2	30.8
Julesburg	28.2	20.5	20.5	20.7
Prewitt	32.8	8.8	23.0	14.5
Point of Rocks	70.0	62.2	64.0	49.9
Riverside	57.5	52.9	55.2	44.6

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# APPENDIX I

## SNOW COURSE MEASUREMENTS as of March 1, 1969

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES)	
				LAST YEAR	AVG. 53-67
NORTH PLATTE BASIN					
<u>Laramie River</u>					
Deadman (A)	2/27	54	15.5	12.2	12.6
McIntyre	NS			-	8.4
Roach	2/22	68	13.5	15.4	14.4
<u>North Platte River</u>					
Cameron Pass	2/24	70	25.1	25.3	18.8
Columbine Lodge	2/27	65	21.3	20.6	19.6
Northgate	2/24	29	7.0	5.9	5.3
Park View	2/26	35	9.5	6.2	7.2
Willow Cr. Pass(B)	2/26	45	13.2	10.3	9.8
SOUTH PLATTE BASIN					
<u>Boulder Creek</u>					
Boulder Falls	2/26	30	8.4	16.8	9.1
University Camp	2/26	34	9.6	18.0	15.6
<u>Big Thompson River</u>					
Deer Ridge	2/27	14	3.1	3.6	3.9
Hidden Valley	2/27	30	7.2	7.4	7.9
Lake Irene (B)	2/26	55	16.4	19.0	18.2
Long's Peak	3/1	26	6.9	9.5	8.0
Two Mile	2/27	39	11.4	11.5	10.9
<u>Cache La Poudre</u>					
Bennett Creek	2/27	24	5.3	6.6	-
Big South	3/2	5	0.4	3.1	2.4
Cameron Pass	2/24	70	25.1	25.3	18.8
Chambers Lake	3/2	28	7.2	9.8	7.2
Deadman Hill(A)	2/27	54	15.5	12.2	12.6
Hour Glass Lake	2/27	23	4.9	5.4	5.1
Joe Wright	2/24	63	19.5	19.3	-
Lost Lake	3/2	37	8.4	11.2	9.6
Pine Creek	2/26	9	1.9	3.0	1.6
Red Feather	2/26	23	5.1	5.6	5.6
<u>Clear Creek</u>					
Baltimore	2/27	19	4.3	8.0	5.8
Berthoud Falls	2/27	37	9.0	12.1	11.5
Empire	2/27	19	4.1	6.9	6.0
Grizzly Peak	2/26	46	13.5	15.5	13.4
Loveland Lift	2/27	46	13.0	20.1	17.7
Loveland Pass	2/27	45	12.0	12.5	12.3
<u>Saint Vrain River</u>					
Copeland Lake	3/1	12	3.5	4.8	3.7
Ward	2/27	17	3.6	6.0	4.8
Wild Basin	NS			-	9.7
<u>South Platte River</u>					
Como	2/26	20	4.4	6.6	-
Geneva Park	2/27	15	2.4	3.1	3.1
Horseshoe Mt.	2/24	32	8.0	6.1	-
Hoosier Pass	2/25	33	9.4	10.6	10.5
Jefferson Creek	2/26	28	7.2	8.5	7.4
Mosquito	2/25	30	7.6	7.6	-
Trout Creek Pass	2/24	17	3.8	3.8	-
ARKANSAS BASIN					
<u>Arkansas River</u>					
Bigelow Divide	2/27	13	2.4	8.7	4.8
Cooper Hill (B)	2/28	37	8.8	9.6	8.5
East Fork	2/27	32	8.3	8.6	7.6
Four Mile Park	2/27	22	4.4	6.4	4.6
Fremont Pass	2/27	46	12.7	13.1	12.4
Garfield	2/27	38	11.6	10.8	11.4
Monarch Pass	2/27	45	14.5	13.1	14.3
Tennessee Pass	2/27	37	8.2	9.2	8.5
Twin Lakes Tunnel	2/27	28	6.8	8.5	8.6
Westcliffe	2/27	26	6.0	10.4	5.7

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES)	
				LAST YEAR	AVG YEAR 53-67
<u>Cucharas River</u>					
Blue Lakes	NS			-	3.5
Cucharas Pass	2/27	17	3.9	8.2	-
LaVeta Pass (B)	2/27	28	7.0	8.9	7.8
<u>Purgatoire River</u>					
Bourbon	2/27	24	5.1	-	6.4
<b>RIO GRANDE BASIN-COLO</b>					
<u>Alamosa River</u>					
Silver Lakes	2/24	28	7.2	7.0	5.5
Summitville (A)	2/27	73	17.0	13.8	14.6
<u>Conejos River</u>					
Cumbres (A)	2/27	90	24.5	13.8	16.5
Platoro	2/27	69	15.5	14.4	13.8
River Springs	2/26	26	7.4	4.3	5.8
<u>Culebra River</u>					
Brown Cabin	2/28	19	4.8	5.5	-
Cottonwood (B)	2/28	23	6.5	5.4	-
Culebra (A)	2/27	36	7.9	7.8	7.3
LaVeta Pass (B)	2/27	28	7.0	8.9	7.8
Trinchera (B)	2/27	27	6.2	7.8	-
<u>Rio Grande</u>					
Cochetopa Pass	2/26	20	3.4	5.4	4.5
Grayback	NS			-	-
Hiway	2/27	84	25.2	20.0	21.4
Lake Humphrey	2/25	28	5.4	8.3	6.2
Love Lake	2/27	28	5.4	8.3	-
Pass Creek	2/27	47	13.2	13.5	10.8
Pool Table	2/25	20	4.6	6.4	5.9
Porcupine	2/27	34	8.4	10.6	8.7
Santa Maria	2/26	21	5.1	6.3	4.4
Upper Rio Grande	2/27	36	11.0	10.3	6.6
Wolf Cr. Pass	2/27	95	29.3	22.6	22.9
Wolf Cr. Sum. (B)	2/27	100	28.0	22.8	22.1
<b>RIO GRANDE BASIN-N.M.</b>					
<u>Pecos River</u>					
Panchuela	2/26	12	3.3	5.1	3.2
<u>Rio Chama</u>					
Bateman	2/26	48	13.9	10.5	9.4
Capulin Peak	2/26	24	6.6	5.3	4.5
Chama Divide	2/26	23	6.7	3.9	3.6
Chamita	2/26	46	13.3	7.0	7.9
<u>Rio Grande</u>					
Aspen Grove	2/25	13	4.3	4.9	5.2
Big Tesuque	2/26	19	6.8	4.8	4.6
Bluebird Mesa	2/28	23	6.2	4.9	4.7
Cordova (A)	2/27	45	10.8	10.9	9.7
Elk Cabin	2/28	7	1.7	4.0	3.3
Fenton Hill	2/20	27	6.2	5.7	3.9
Mora View	2/24	5	1.4	3.0	-
Pajarito Peak	2/26	4	1.0	1.1	1.5
Payrole (A)	2/27	37	9.8	10.0	7.8
Quemazon	2/27	32	7.6	8.0	7.7
Rio En Medio	2/26	29	10.0	6.4	7.9
Sandavol	2/27	20	4.7	6.4	5.0
Taos Canyon	2/26	18	5.9	4.6	4.4
Tres Ritos	2/25	17	5.3	5.0	4.8
<u>Rio Hondo</u>					
Twinning	2/26	29	9.9	8.7	-
<u>Red River</u>					
Hematite Park	2/25	13	3.3	5.0	3.7
Red River	2/25	20	5.7	6.4	5.2

NOTE:

- NS - No Survey
- (A) - Air Observed
- (B) - On Adjacent Drainage



# APPENDIX I

## SNOW COURSE MEASUREMENTS as of March 1, 1969

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES)	
				LAST YEAR	AVG. 53-67
SAN JUAN-DOLORES BASIN					
<u>Animas River</u>					
Cascade	2/27	63	18.4	14.9	10.2
Lemon	2/27	51	14.7	11.6	-
Mineral Creek	2/25	64	17.9	17.5	11.7
Molas Lake	2/25	54	15.6	14.7	11.0
Red Mountain	2/25	100	30.3	30.2	23.5
Purgatory	2/27	84	22.4	20.0	-
Silverton Sub-Sta.	2/25	39	11.1	11.7	5.6
Spud Mountain	2/25	97	28.6	23.2	19.5
<u>Dolores River</u>					
Lizzard Head	2/26	70	20.1	17.2	12.6
Lone Cone	2/27	66	19.7	14.8	-
Rico	2/26	52	14.9	10.4	6.8
Telluride	2/26	31	9.0	8.7	5.9
Trout Lake	2/26	56	16.0	14.8	10.7
<u>San Juan River</u>					
Chama Divide (B)	2/26	23	6.7	3.9	3.6
Chamita (B)	2/26	46	13.3	7.0	7.9
Upper San Juan	2/27	113	34.6	26.2	25.2
Wolf Cr. Pass (B)	2/27	95	29.3	22.6	22.9
Wolf Cr. Summit	2/27	100	28.0	22.8	22.1
GUNNISON RIVER					
<u>Gunnison River</u>					
Alexander Lake (A)	2/27	93	25.0	16.9	17.0
Black Mesa	NS		-	-	-
Blue Mesa	2/27	34	9.6	9.6	3.5
Butte	2/28	56	15.6	13.2	-
Cochetopa Pass (B)	2/26	20	3.4	5.4	4.5
Crested Butte	2/27	56	15.6	11.6	10.6
Keystone	2/26	74	21.1	15.5	16.3
Lake City	2/25	28	6.0	7.6	7.6
Long Gulch	NS		-	-	-
Mesa Lakes (B)	2/26	61	19.7	12.5	13.4
McClure Pass	2/25	55	16.5	16.8	14.6
Park Cone	2/27	46	11.6	7.3	8.8
Park Reservoir	2/26	103	31.1	20.2	19.6
Porphyry Creek	2/28	46	13.7	12.2	13.9
Tomichi	2/28	38	11.1	10.4	10.2
<u>Surface Creek</u>					
Alexander Lake (A)	2/27	93	25.0	16.9	17.0
Mesa Lakes (B)	2/26	61	19.7	12.5	13.4
Park Reservoir	2/26	103	31.1	20.2	19.6
<u>Uncompahgre River</u>					
Ironton Park	2/27	46	14.3	14.7	10.4
Red Mountain Pass	2/25	100	30.3	30.2	23.5
Telluride (B)	2/26	31	9.0	8.7	5.9
COLORADO BASIN					
<u>Blue River</u>					
Blue River	2/25	28	6.4	7.5	7.3
Fremont Pass	2/27	46	12.7	13.1	12.4
Frisco	2/26	25	6.5	7.5	6.3
Grizzly Peak	2/26	46	13.5	15.5	13.4
Hoosier Pass (B)	2/25	33	9.4	10.6	10.5
Shrine Pass	2/26	49	14.3	14.7	13.6
Snake River	2/26	29	7.5	7.2	6.7
Summit Ranch	NS		-	-	6.0

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES)	
				LAST YEAR	AVG. 53-67
<u>Colorado River</u>					
Arrow	2/27	38	10.9	11.6	9.3
Berthoud Pass	2/27	46	12.1	14.3	11.6
Berthoud Summit	2/27	45	11.9	16.9	14.8
Cooper Hill	2/28	37	8.8	9.6	8.5
Fiddler Gulch	NS			16.3	13.5
Glen Mar Ranch	2/25	29	8.0	6.4	6.4
Gore Pass	2/25	34	9.9	8.7	8.4
Grand Lake	2/26	35	8.5	7.9	6.6
Lake Irene	2/26	55	16.4	19.0	18.2
Lapland	2/26	34	9.8	8.6	8.6
Lulu	2/27	52	14.7	16.1	13.2
Lynx Pass	2/25	43	12.2	-	10.0
McKenzie Pass	2/24	29	8.0	5.7	4.8
Middle Fork	2/25	32	8.8	9.3	7.5
Milner	2/26	45	13.2	12.0	11.1
North Inlet	2/25	34	9.0	9.7	7.4
Pando	2/27	36	10.5	7.7	7.9
Phantom Valley	2/26	40	11.4	10.4	8.5
Ranch Creek	2/26	32	8.5	8.5	7.1
Tennessee Pass	2/27	37	8.2	-	8.5
Vail Pass	2/26	48	15.1	15.6	14.0
Vasquez	2/26	39	9.8	11.3	9.5
<u>Roaring Fork River</u>					
Aspen	2/26	52	16.4	12.3	13.0
Chapman	2/26	45	12.9	11.5	-
Independence Pass	2/27	48	14.2	13.9	13.9
Ivanhoe	2/26	51	15.2	15.2	13.8
Kiln	2/26	42	11.2	10.7	-
Last Chance	2/26	35	9.2	8.3	-
Lift	2/28	49	17.0	12.4	13.8
McClure Pass	2/25	55	16.5	16.8	14.6
Nast	2/26	31	7.9	6.1	5.2
North Lost Trail	2/25	57	18.8	14.8	13.0
<u>Williams Fork River</u>					
Glen Mar Ranch	2/25	29	8.0	6.4	6.4
Jones Pass	2/27	43	12.2	13.3	-
Middle Fork	2/25	32	8.8	9.2	7.5
<u>Willow Creek</u>					
Granby	2/26	28	7.8	5.2	6.1
Willow Cr. Pass	2/26	45	13.2	10.3	9.8
<u>Plateau Creek</u>					
Mesa Lakes	2/26	61	19.7	12.5	13.4
Park Reservoir	2/26	103	31.1	20.2	19.6
Trickle Divide	2/26	102	30.9	21.6	21.1
YAMPA BASIN					
<u>Elk River</u>					
Clark	2/26	45	13.4	-	11.5
Elk River	2/26	63	16.9	18.2	15.5
Hahn's Peak	2/26	55	15.3	13.8	-
<u>White River</u>					
Burro Mountain	2/26	54	16.1	15.1	15.2
Rio Blanco	2/25	48	15.2	13.7	12.9
<u>Yampa River</u>					
Bear River	NS			-	-
Columbine Lodge(B)	2/27	65	21.3	20.6	19.6
Dry Lake	2/28	62	19.2	19.6	17.6
Lynx Pass (B)	2/25	43	12.2	12.4	10.0
Rabbit Ears	2/28	74	24.4	25.5	21.2
Yampa View	2/27	47	15.3	15.6	12.3

NOTE:

- NS - No Survey
- (A) - Air Observed
- (B) - On Adjacent Drainage

# APPENDIX II

SOIL MOISTURE MEASUREMENTS as of March 1, 1969

STATION	DATE OF SURVEY	CAPACITY (INCHES)	THIS YEAR	LAST YEAR	AVG. ALL DATA
NORTH PLATTE BASIN					
<u>North Platte River</u>					
Muddy Pass	11/5/68	11.1	6.1	6.2	6.4
Willow Pass	11/13/68	9.5	5.7	6.2	6.7
SOUTH PLATTE BASIN					
<u>Boulder Creek</u>					
Alpine Camp	12/11/68	6.9	3.9	5.2	3.7
<u>Big Thompson River</u>					
Beaver Dam	12/11/68	7.1	3.6	4.6	3.8
Guard Station	12/11/68	6.9	2.9	3.5	3.4
Two Mile	12/11/68	9.1	5.1	5.0	5.5
<u>Clear Creek</u>					
Clear Creek	12/26/68	9.5	5.7	7.7	7.1
Hoop Creek	12/26/68	4.9	2.9	3.0	2.9
<u>Cache La Poudre River</u>					
Feather	12/10/68	10.1	4.0	4.5	4.5
Laramie Road	9/25/68	12.4	6.5	6.6	7.8
<u>South Platte River</u>					
Hoosier Pass	11/12/68	7.8	4.7	4.8	4.9
Kenosha Pass	11/12/68	4.4	2.3	2.3	2.6
ARKANSAS BASIN					
<u>Arkansas River</u>					
Garfield	11/12/68	6.7	3.1	6.0	3.9
Leadville	12/26/68	7.8	4.0	5.7	4.2
Twin Lakes Tunnel	11/8/68	4.5	0.9	2.8	2.3
RIO GRANDE BASIN-COLORADO					
<u>Conejos River</u>					
Mogote	10/29/68	10.7	4.7	6.3	5.5
<u>Rio Grande</u>					
Alberta Park	10/24/68	8.2	4.9	6.2	5.0
Bristol View	10/24/68	6.1	2.9	2.4	3.9
LaVeta Pass	10/16/68	11.9	10.0	10.0	7.2
RIO GRANDE BASIN-NEW MEXICO					
<u>Rio Chama</u>					
Bateman	10/18/68	6.7	2.1	4.1	2.5
Chamita	10/22/68	8.0	5.0	5.0	2.4
<u>Rio Grande</u>					
Aqua Piedra	10/30/68	7.2	3.9	2.5	3.1
Big Tesuque	11/29/68	3.7	0.9	2.3	1.5
Fenton Hill	11/29/68	6.5	2.1	4.7	3.8
Rio En Medio	11/18/68	3.5	0.9	2.2	1.4
Taos Canyon	10/30/68	3.3	2.0	2.5	2.3
<u>Red River</u>					
Red Summit	10/30/68	4.8	1.8	1.5	2.2
ANIMAS - SAN JUAN BASINS					
<u>Animas River</u>					
Cascade	11/12/68	9.1	3.3	5.9	6.3
Mineral Creek	11/12/68	5.7	2.1	3.8	3.7
Molas Lake	11/12/68	9.4	3.0	6.2	4.6
<u>Dolores River</u>					
DoTores	11/12/68	19.6	9.8	12.7	6.7
Lizzard Head	11/12/68	11.8	3.7	7.6	8.3
Rico	11/12/68	13.8	5.5	11.1	9.9

ALL PROFILES 4 FEET DEEP

# APPENDIX II

SOIL MOISTURE MEASUREMENTS as of March 1, 1969

STATION	DATE OF SURVEY	CAPACITY (INCHES)	THIS YEAR	LAST YEAR	AVG. ALL DATA
GUNNISON BASIN					
<u>Gunnison River</u>					
King	11/12/68	3.3	2.1	2.7	1.9
COLORADO BASIN (MAINSTEM)					
<u>Blue River</u>					
Blue River	11/12/68	4.2	2.7	2.3	2.8
<u>Colorado River</u>					
Berthoud Pass	11/18/68	3.9	1.9	2.9	2.8
Gore	NS	4.9	-	2.3	2.5
Grand Mesa	10/18/68	12.5	8.5	8.9	9.3
Ranch Creek	11/14/68	8.7	5.0	5.1	6.0
Vail	12/28/68	12.3	8.1	6.4	6.9
<u>Roaring Fork River</u>					
Placita	11/14/68	9.3	5.1	5.3	5.2
YAMPA BASIN					
<u>Yampa River</u>					
Hahn's Peak	11/5/68	19.0	8.7	5.9	11.8

ALL PROFILES 4 FEET DEEP



# LIST of COOPERATORS

The following organizations cooperate in snow surveys for the Colorado, Platte, Arkansas and Rio Grande watersheds. Many other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

## STATE

Colorado State Engineer  
New Mexico State Engineer  
Nebraska State Engineer  
Colorado Experiment Station  
Rocky Mountain Forest and Range Experiment Station

## FEDERAL

Department of Agriculture

Forest Service  
Soil Conservation Service

Department of Interior

Bureau of Reclamation  
Geological Survey  
National Park Service  
Indian Service

Department of Commerce

Weather Bureau

War Department

Army Engineer Corps

Atomic Energy Commission

## INVESTOR OWNED UTILITIES

Colorado Public Service Company  
Public Service Company of New Mexico

## MUNICIPALITIES

City of Denver                      City of Greeley  
City of Boulder                      City of Fort Collins

## WATER USERS ORGANIZATIONS

Arkansas Valley Ditch Association  
Colorado River Water Conservation District

## IRRIGATION PROJECTS

Farmers Reservoir and Irrigation Company  
San Luis Valley Irrigation District  
Santa Maria Reservoir Company  
Costilla Land Company  
Uncompahgre Valley Water Users' Association  
Twin Lakes Reservoir and Canal Company  
Trinchera Irrigation Co.

UNITED STATES DEPARTMENT OF AGRICULTURE  
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SNOW SURVEY UNIT  
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with the Snow Survey"*